



## Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Miyata, T. Attorney Docket: 2605/102  
 Serial No: 10/009877 Art Group Unit: 1651  
 Date Filed: November 13, 2001 Examiner Name: Hanley  
 Invention: BLOOD CARBONYL COMPOUND TRAPPING AGENT

### LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

#### United States Patents

Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
<u>SMA</u>	AA	3,284,531	Nov. 8, 1966	Shaw et al.	260/677
<u>SMA</u>	AB	3,793,187	Feb. 19, 1974	Marx et al.	208/289

#### International Patents

Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
<u>SMA</u>	AC	WO 96/31537	Oct. 10, 1996	Li et al.	C07K 14/79
<u>SMA</u>	AD	WO 00/10606	Mar. 2, 00	Miyata	A61K 45/00

#### Other Documents

Examiner Initials	Reference Number	Author	Title of Article, Title of Journal, Volume Number, Page Numbers, Date
<u>SMA</u>	AE	Ungar et al.	"Inhibition of Binding of Aldehydes of Biogenic Amines in Tissues", Biochemical Pharmacology, Vol. 22, pp. 1905-1913, 1973



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|----|------------------|--|
| AF | Jarret et al.    | "Elimination of glyoxal and glyoxylic acid by granular activated carbon filtration Mechanisms involved", Sciences De L'Eau, Vol. 5, pp. 377-400, 1986  |
| AG | Chaudhuri et al. | "Removal of carbonyl sulfide from a liquid hydrocarbon with activated alumina", Sep. Technol., Vol. 2, pp. 58-61, 1992   |
| AH | Niwa et al.      | "Modification of $\beta_2m$ with advanced glycation end products as observed in dialysis-related amyloidosis by 3-DG accumulating in uremic serum", Kidney International, Vol. 49, pp. 861-867, 1996   |
| AI | Feather et al.   | "The Use of Aminoguanidine to Trap and Measure Dicarbonyl Intermediates Produced During the Maillard Reaction", American Chemical Society, Chapter 3, pp. 24-31, 1996  |
| AJ | Booth et al.     | " <i>In Vitro</i> Kinetic Studies of Formation of Antigenic Advanced Glycation End Products (AGEs)", The Journal of Biological Chemistry, Vol. 272, No. 9, pp. 5430-5437, 1997   |
| AK | Fishbane et al.  | "Reduction of plasma apolipoprotein-B by effective removal of circulating glycation derivatives in uremia", Kidney International, Vol. 52, pp. 1645-1650, 1997   |
| AL | Miyata et al.    | "2-Isopropylidenehydrazono-4-oxo-thiazolidin-5-ylacetanilide (OPB-9195) treatment inhibits the development of intimal thickening after balloon injury of rat carotid artery: role of glycooxidation and lipoxidation reactions in vascular tissue damage", FEBS Letters, Vol. 445, pp. 202-206, 1999 |

Examiner Signature: \_\_\_\_\_

Date Considered: \_\_\_\_\_

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation *if not* in conformance and not considered. Include copy of this form with next communication to applicant.

02605/00102 189221.1



SECTION 2. FORMS PTO/SB/08A and 08B (formerly Form PTO-1449)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Toshio Miyata

Attorney Docket: 2605/102

Serial No: 10/009,877

Art Group Unit: ~~1614~~ 1651

Date Filed: November 13, 2001

Examiner Name: ~~Not Yet Assigned~~ Hanley, S.

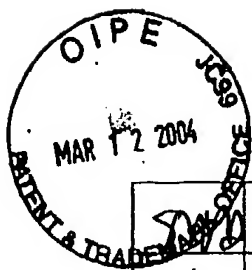
Invention: Blood Carbonyl Compound-Trapping Agent

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

U.S. PATENT DOCUMENTS					
Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
SMA	DP	US5,128,360	07/07/1992	Cerami, et al.	514/400
	DQ	US5,827,820	10/27/1998	duMoulin, et al.	514/2
	DR	US5,855,882	01/05/1999	Li, et al.	424/94.61
	DS	US5,861,238	01/19/1999	Li, et al.	435/2
	DT	US5,891,341	04/06/1999	Li, et al.	210/646
	DU	US5,962,245	10/05/1999	Li, et al.	435/18

FOREIGN PATENT DOCUMENTS						
Exam. Initials	Ref. No.	Country Code	Doc. No.	Public. Date	Patentee or Applicant	Class/Subclass
SMA	DV	JP	5-105633, A and corresponding English translation.	4/27/93	Sato, T.	A61K 31/70
	DW	JP	4-187158, A and corresponding English abstract	7/3/92	Masuda, T., et al.	A61M 1/28
	DX	JP	8-131542, A and corresponding English translation	5/28/96	Izumi, G., et al.	A61M 1/14
	DY	JP	6-507822, A See Ref. DQ for corresponding US Application	9/8/94	duMoulin, A., et al.	A61M 1/28
	DZ	JP	63-19149, A (We Could Not Obtain any English Translation or a Concise English Explanation of this Document)	1/26/88	Suzuki, T, et al.	A61 J 1/00
SMA	EA	WO	93/19792 (Ref. DQ is a continuation of this application)	10/14/93	duMoulin A, et al.	A61M 1/28

OTHER DOCUMENTS			
Exam. Initials	Ref. No.	Author	Title of Article, Title of Journal, Volume Number, Page Numbers, Date
SMA	EB	Tanaka Y, et al.	Inhibitory Effect of Metformin on Formation of Advanced Glycation End Products, <i>Current Therapeutic Research</i> , Vol. 58, No. 10 (10/1997) pp. 693-697.



EC	Lo TWC, et al.	Binding and Modification of Proteins by Methylglyoxal Under Physiological Conditions, <i>J Biol Chem</i> , Vol. 269, No. 51 (12/23/1994): pp. 32299-32305
ED	Niquette, P., et al.	Backwashing First-Stage Sand-BAC Filters, <i>J Am Water Works Assoc</i> , Vol. 90, Issue 1 (January, 1998), pp 86-97
EF	Combet, S., et al.	Vascular Proliferation and Enhanced Expression of Endothelial Nitric Oxide Synthase in Human Peritoneum Exposed to Long-Term Peritoneal Dialysis, <i>J Am Soc Nephrol</i> , 11:717-728 (2000)
EG	Combet, S., et al.	Regulation of Aquaporin-1 and Nitric Oxide Synthase Isoforms in a Rat Model of Acute Peritonitis, <i>J Am Soc Nephrol</i> , 10:2185-2196 (1999)
EH	Faller, B.	Amino Acid-Based Peritoneal Dialysis Solutions, <i>Kidney Intl</i> , Vol. 50, Suppl. 56 (1996), pps. S-81-S-85.
EI	Miyata, T., et al.	Mechanism of the Inhibitory Effect of OPB-9195 [(±)-2-Isopropylidenehydrazono-4-oxo-thiazolidin-5-ylacetanilide] on Advanced Glycation End Product and Advanced Lipoxidation End Product Formation, <i>J Am Soc Nephrol</i> , 11:1719-1725 (2000).
EJ	Miyata, T., et al.	Accumulation of Carbonyls Accelerates the Formation of Pentosidine, an Advanced Glycation End Product: Carbonyl Stress in Uremia, <i>J. Am Soc Nephrol</i> , 9:2349-2356 (1998).
EK	Miyata, T., et al.	Autoxidation Products of Both Carbohydrates and Lipids are Increased in Uremic Plasma: Is there Oxidative Stress in Uremia?, <i>Kidney Intl</i> , Vol. 54 (1998), pp. 1290-1295.
EL	Miyata, T., et al.	Alterations in Nonenzymatic Biochemistry in Uremia: Origin and Significance of "Carbonyl Stress" in Long-Term Uremic Complications, <i>Kidney Intl</i> , Vol. 55 (1999) pp. 389-399.
EM	Nakayama, M., et al.	Immunohistochemical Detection of Advanced Glycosylation End-Products in the Peritoneum and its Possible Pathophysiological Role in CAPD, <i>Kidney Intl</i> , Vol. 51 (1997) pp. 182-186.
EN	Wilkie, ME, et al.	Polyglucose Solutions in CAPD, <i>Perit Dial Intl</i> , Vol. 17, (1997), pp. S47-S50.
EO	Yamada, K., et al.	Immunohistochemical Study of Human Advanced Glycosylation End-Products (AGE) in Chronic Renal Failure, <i>Clin Nephrol</i> , Vol. 42, No. 6 (1994) pp. 354-361.

Examiner Signature: \_\_\_\_\_

Date Considered: \_\_\_\_\_

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## SECTION 2. FORMS PTO/SB/08A and 08B (formerly Form PTO-1449)

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Applicants: Toshio Miyata

Attorney Docket: 2605/102

TECH CENTER 1600/2900

Serial No: 10/009,877

Art Group Unit: ~~1614~~ 1651

Date Filed: November 13, 2001

Examiner Name: Not Yet Assigned: Hanley, S.

Invention: Blood Carbonyl Compound-Trapping Agent

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U.S. PATENT DOCUMENTS					
Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
SMW	AN	US4,977,287	12/11/90	Kakimoto, et al.	556/83

FOREIGN PATENT DOCUMENTS						
Exam. Initials	Ref. No.	Country Code	Doc. No.	Public. Date	Patentee or Applicant	Class/Subclass
SMW	AO	JP	62-142114, A *See Ref. No. DC for Corresponding EP Appln.	6/25/87	Cerami, A., et al.	A61K31/155
	AP	JP	62-249908, A	10/30/87	Fujimoto, D., et al.	A 61K 7/00
	AQ	JP	64-056614, A	3/3/89	Ouchida, S., et al.	A 61K 31/155
	AR	JP	64-083059, A	3/28/89	Ouchida, S., et al.	C07C143/72
	AS	JP	2-156, A *See Ref. No. DD for Corresponding EP Appln.	1/5/90	Cerami, A., et al.	C07281/16
	AT	JP	2-765, A	1/5/90	Ouchida, S., et al.	C07C281/16
	AU	JP	2-42053, A *See Ref. No. DE for Corresponding EP Appln.	2/13/90	Ouchida, S., et al.	C07C281/16
	AV	JP	6-9380	1/18/94	Williamson, J.R., et al.	A61K 31/155
	AW	JP	10-167965, A	6/23/98	Yasumura, K., et al.	A61K 31/415
	AX	JP	6-192089, A	7/12/94	Niigata, K., et al.	A61K 31/41
	AY	JP	6-298737, A	10/25/94	Niigata, K., et al.	C07D231/14
	AZ	JP	6-298738, A	10/25/94	Niigata, K., et al.	C07D231/38
	BA	JP	5-201993	8/10/93	Miyajima, K., et al.	C07D233/88
	BB	JP	6-135968, A	5/17/94	Kurono, M., et al.	C07D491/107
	BC	JP	7-133264, A	5/23/95	Yasumura, K., et al.	C07D233/88
	BD	JP	10-182460, A	7/7/98	Hotta, A., et al.	A61K 31/415
	BE	JP	4-9375, A	1/14/92	Soda, T., et al.	C07D277/48
	BF	JP	9-59258, A	3/4/97	Matsui, T., et al.	C07D233/88
	BG	JP	3-261772, A	11/21/91	Sumoto, K., et al.	C07D277/06
AMS	BH	JP	8-157473, A *See Ref. No. DF for Corresponding WO Appln.	6/18/96	Ohara, Y., et al.	C07D417/06

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Applicants: Miyata, T. Attorney Docket: 2605/102  
Serial No: 10/009,877 Art Group Unit: ~~Not Assigned~~ 1651  
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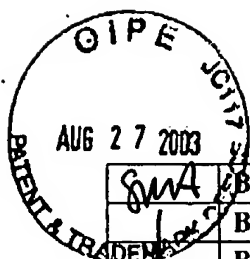
International Patents

Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
<u>SMJ</u>	AM	WO 01/24790	2001 April 12	Miyata	A61K 31/155

Examiner Signature: [Signature]  
Date Considered: 7/2/04

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BJ	JP	10-175954, A	6/30/98	Iyobe, A., et al.	C07D213/65
BK	JP	6-287180, A	10/11/94	Niigata, K., et al.	C07D231/18
BL	JP	6-305964	11/1/94	Yasumura, K., et al.	A61K 31/415
BM	JP	3-161441, A *See Ref. No. DG for Corresponding EP Appln.	7/11/91	Inoue, J.	A61K31/47
BN	JP	7-196498, A	8/1/95	Zuckerman, S.H.	A61K31/40
BO	JP	3-204874, A	9/6/91	Ouchida, S., et al.	C07D311/72
BP	JP	4-308586, A	10/30/92	Ouchida, S., et al.	C07D311/04
BQ	JP	2-167264, A *See Ref. No. DH for Corresponding EP Appln.	6/27/90	Soda, T., et al.	C07D213/74
BR	JP	3-148220, A	6/25/91	Kurozumi, M., et al.	A61K 31/41
BS	JP	5-9114, A	1/19/93	Hayakawa, M., et al.	A61K 31/12
BT	JP	5-310565 A	11/22/93	Ulrich, P.C., et al.	A61K 31/16
BU	JP	62-249909, A *See Ref. No. DI for Corresponding EP Appln.	10/30/87	Nagaoka, Y., et al.	A61K7/00
BV	JP	2-62885, A *See Ref. No. AN for Corresponding US Patent	3/2/90	Kakimoto, N., et al	C07F7/30
BW	JP	5-255130, A	10/5/93	Kakimoto, N., et al	C07B63/04
BX	JP	7-247296, A	9/26/95	Kakimoto, N., et al	C07F7/30
BY	JP	8-59485, A	3/5/96	Sawai, K., et al.	A61K31/80
BZ	JP	3-240725, A	10/28/91	Morisake, M., et al	A61K31/35
CA	JP	7-206838, A	8/8/95	Hosokawa, T.,	C07D307/32
CB	JP	9-241165, A	9/16/97	Takahashi, H., et al.	A61K31/70
CC	WO	94/04520 A1	3/3/94	Hosokawa, T.,	C07D307/32
CD	JP	6-206818, A	7/26/94	Schoenafinger, K., et al.	A61K31/425
CE	JP	9-59233, A	3/4/97	Sato, F., et al.	C07C229/36
CF	JP	9-40626, A	2/10/97	Sato, F., et al.	C07C237/20
CG	JP	9-124471, A	5/13/97	Sato, F., et al.	A61K31/135
CH	JP	6-305959	11/1/94	Hosokawa, T.,	A61K31/19
CI	WO	91/11997, A1	8/22/91	Inoue, J.	A61K31/195
CJ	JP	10-158265, A	6/16/98	Nakazawa, Y., et al.	C07D471/16
CK	WO	97/09981 A1	3/20/97	Hudson, B.G., et al	A61K31/425
CL	JP	6-256280, A	9/13/94	Golub, L.M., et al.	C07C237/26
CM	JP	9-221427, A	8/26/97	Ito, M.	A61K31/73
CN	JP	9-40519, A	2/10/97	Uchino, K., et al.	A61K7/00
CO	JP	20753, A	1/5/90	Ouchida, S., et al.	C07C243/28
CP	JP	5-505189, A *See Ref. No. CX for Corresponding WO Appln.	8/5/93	Meglasson, M.D.	A61K31/19
CQ	JP	7-500811, A *See Ref. No. CY for Corresponding WO Appln.	1/26/95	Ulrich, P.C., et al.	C07D239/42
CR	JP	4-502611, A *See Ref. No. CZ Corresponding WO Appln.	5/14/92	Grigg, G.W., et al.	A61K37/02
CS	JP	7-503713, A *See Ref. No. DA for Corresponding WO Appln.	4/20/95	Ulrich, P.C., et al.	A61K31/195
CT	JP	7-500580, A *See Ref. No. DB for Corresponding WO Appln.	1/19/95	Michaelis, J., et al.	A61K38/00

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CV	JP	6-287179, A	10/11/94	Niigata, K., et al.	C07D271/08
CW	EP	0474874, A1	3/18/92	Inoue, J.	A61K31/195
CX	WO	91/12800, A1	9/5/91	Meglasson, M.D.	A61K31/195
CY	WO	92/11853, A1	7/23/92	Ulrich, P.C., et al.	A61K31/505
CZ	WO	90/06102, A1	6/14/90	Grigg, G.W., et al.	A61K7/40
DA	WO	93/14750, A1	8/5/93	Ulrich, P.C., et al.	A61K31/195
DB	WO	93/04690, A1	3/18/93	Michaelis, J., et al.	A61K37/02
DC	EP	0222313, A2	5/20/87	Cerami, A., et al.	A61K31/55
DD	EP	0316852, A2	5/24/89	Ulrich, P.C., et al.	A61K31/155
DE	EP	0339496, A2	11/2/89	Ohuchida, S., et al. [sic]	C07C133/10
DF	WO	96/11196, A1	4/18/96	Ohara, Y., et al.	C07D417/14
DG	EP	0433679, A2	6/26/91	Inoue, J.	A61K31/535
DH	EP	0359112, A2	3/21/90	Sohda, T., et al.	C07D277/42
DI	EP	0242855, A2	10/28/87	Nagaoka, Y., et al.	A61K7/48

OTHER DOCUMENTS			
Exam. Initials	Ref. No.	Author	Title of Article, Title of Journal, Volume Number, Page Numbers, Date
SM	DJ	Miyata, T., et al.	Implication of an Increased Oxidative Stress in the Formation of Advanced Glycation End Products in Patients with End-Stage Renal Failure, <i>Kidney International</i> , Vol. 31 (1997) pp. 1170-1181
	DK	Footte, E.F., et al.	The Pharmacokinetics of Aminoguanidine in End-Stage Renal Disease Patients on Hemodialysis, <i>American Journal of Kidney Disease</i> , Vol. 25, No. 3 (March) 1995: pp. 420-425
	DL	Nakamura, S., et al.	Progression of Nephropathy in Spontaneous Diabetic Rats is Prevented by OPB-9195, a Novel Inhibitor of Advanced Glycation, <i>Diabetes</i> , Vol. 46, May 1997, pp 895-899
	DM	Rahbar, S.	An Abnormal Hemoglobin in Red Cells of Diabetics, <i>Clin. Chim. Acta.</i> , 22 (1968) 296-298
	DN	Miyata T., et al.	Accumulation of Albumin-Linked and Free-Form Pentosidine in the Circulation of Uremic Patients with End-Stage Renal Failure: Renal Implications in the Pathophysiology of Pentosidine, <i>Journ. of the Amer. Society of Nephrology</i> , Vol. 7, Number 8, 1996
SM	DO	Maillard L.-C.	Reaction Generale Des Acides Amines Sur Les Sucres: Ses Consequences Biologiques, <i>Societe de Biologie</i> , April 20, p. 599-603

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